MERCURY TREATMENT FACILITY
AT THE Y-12 NATIONAL SECURITY COMPLEX

FACT: More than 20 million pounds of mercury were used at the Y-12 National Security Complex (Y-12) during the 1950s and early 1960s, when Y-12 used enormous quantities of the metal to process lithium for use in hydrogen bombs. Approximately 700,000 pounds are suspected to have been released into buildings, soils, a creek, sediments, and the air.

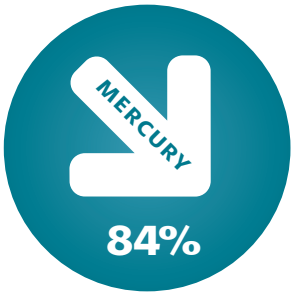
CHALLENGE: The Upper East Fork Poplar Creek leaves the Y-12 plant and traverses through the City of Oak Ridge, carrying mercury from the plant at levels above Clean Water Act standards for fish consumption. The risk lies in eating fish from the creek, not from drinking the water.

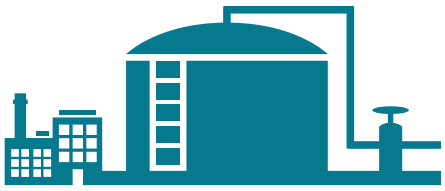
SOLUTION: The Oak Ridge Office of Environmental Management (OREM) will construct a water treatment facility at the Y-12 site. The treatment facility is a key component of the mercury remediation strategy at Y-12 and will help reduce mercury releases into the Upper East Fork Poplar Creek. It will also serve as an important control measure during cleanup of the site.

Y-12 Mercury Treatment Facility

REDUCES MERCURY FLUX

The treatment facility will immediately reduce mercury released from the West End Mercury Area storm sewer to the Upper East Fork Poplar Creek surface water. The facility is anticipated to reduce mercury concentrations in Y-12's water by 84 percent.





ADAPTABLE

The facility's modular design will enable future modifications as needed, such as adding additional storm water storage or unit operations to achieve greater mercury reductions based on performance monitoring data.

REGULATORY COMPLIANCE

The treatment facility will make progress toward achieving compliance with regulatory criteria and is expected to assist in eventually removing water and fish consumption restrictions.

PAVES WAY FOR MEANINGFUL CLEANUP

The treatment facility will provide a mechanism to control potential increases in mercury releases resulting from future demolition of mercury-use buildings. The facility will also allow OREM to conduct the work necessary to remove Y-12's greatest environmental risks.

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